

***Abstract***

[0047] An apparatus for formation of a three dimensional object comprising a sealed container; an electron beam subsystem capable of directing energy within said container; a positioning subsystem contained within said container; a wire feed subsystem contained within said container; an instrumentation subsystem electronically connected to said electron beam subsystem, positioning subsystem, and wire feed subsystem; and a power distribution subsystem electrically connected to said electron beam subsystem, positioning subsystem, wire feed subsystem, and said instrumentation subsystem.